

Solar activity was predominantly at low levels with very low levels observed on 17 January. The largest flares of the period were a C6/Sf flare at 14/0122 UTC from Region 1652 (N17, L=184, class/area Fkc/320 on 07 January) and a C5/Sf flare at 18/1707 UTC from Region 1654 (N08, L=151, class/area Fki/1100 on 11 January). The C5 flare had an associated Type II radio sweep (1695 km/s). On 16 January, a long duration C2 flare was observed from Region 1650 (S30, L=193, class/area Eho/250 on 07 January) which had decayed to plage by the time of the event. A partial halo, coronal mass ejection (CME), with the majority of the ejecta off the SW limb, was first seen in SOHO/LASCO C2 imagery at 16/1900 UTC (estimated plane-of-sky speed of 728 km/s). This event was likely associated with a filament eruption near Region 1650.

A greater than 10 MeV proton enhancement was observed at geosynchronous orbit beginning late on 16 January, peaked at 2 pfu at 17/1415 UTC, and declined to background levels by approximately 18/0600 UTC.

The greater than 2 MeV electron flux at geosynchronous orbit was at moderate levels on 14-16 January and again on 19-20 January. High levels were observed on 17-18 January in response to a shock arrival from the 13 January CME.

Geomagnetic field activity ranged from quiet to active levels. The period began under the influence of a positive polarity coronal hole high speed stream (CH HSS). Solar wind speeds increased from approximately 480 km/s to 590 km/s early on 14 January, but started to decrease by late on 14 January. The geomagnetic field responded with quiet to unsettled levels with an isolated minor storm period observed at high latitudes. As solar wind speeds continued to decrease to around 400 km/s by early on 16 January, mostly quiet conditions were observed. By 17 January, total field values (Bt) increased to 16 nT while the Bz component of the interplanetary magnetic field switched from maximum values of approximately +10 nT to -14 nT indicative of the arrival of 13 January CME. The geomagnetic field responded with quiet to active levels with periods of active to minor storm levels at high latitudes. By mid-day on 18 January, total field had decreased to around 7 nT as the CME effects waned. By 19 January, a small shock was observed in ACE data at approximately 19/1647 UTC. A corresponding sudden impulse was observed in the Boulder magnetometer (21 nT) at 19/1733 UTC. The shock arrival was consistent with the arrival of a glancing blow from the 16 January CME. Only quiet to unsettled conditions were observed from 18-20 January with periods of minor storming on 20 January at high latitudes.

Space Weather Outlook

21 January - 16 February 2013

Solar activity is expected to be at very low to low levels until 30 January. A chance for M-class flares exists from 31 January through 15 February when Regions 1652 and 1654 return to the visible disk. By 16 February, very low to low levels are expected.

No proton events are expected at geosynchronous orbit.



The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at normal to moderate levels through 23 January. A chance for an increase to high levels on 24-25 January is expected due to CH HSS activity. A return to low normal levels is expected from 26 January through 09 February. Moderate to high levels are expected from 10-12 February due to activity from another CH HSS. Normal levels are expected again by 13 February through the end of the forecast period.

Geomagnetic field activity is expected to be mostly quiet through the forecast period with unsettled periods expected on 23 January and 9-10 February due to CH HSS effects.



Daily Solar Data

Date	Radio Flux 10.7cm	Sun spot No.	Sunspot Area (10 ⁻⁶ hemi.)	X-ray Background Flux	Flares							
					X-ray			Optical				
					C	M	X	S	1	2	3	4
14 January	154	128	1260	B5.0	6	0	0	3	0	0	0	0
15 January	140	120	1280	B4.7	6	0	0	3	0	0	0	0
16 January	137	62	780	B3.9	1	0	0	0	0	0	0	0
17 January	123	74	650	B2.9	0	0	0	0	0	0	0	0
18 January	115	56	560	B2.7	5	0	0	3	0	0	0	0
19 January	107	46	480	B2.4	2	0	0	0	0	0	0	0
20 January	107	48	410	B2.2	1	0	0	0	0	0	0	0

Daily Particle Data

Date	Proton Fluence (protons/cm ² -day -sr)			Electron Fluence (electrons/cm ² -day -sr)		
	>1 MeV	>10 MeV	>100 MeV	>0.6 MeV	>2MeV	>4 MeV
14 January	3.3e+05	1.2e+04	2.8e+03		3.3e+06	
15 January	2.7e+05	1.1e+04	2.8e+03		1.9e+07	
16 January	5.4e+05	1.1e+04	2.7e+03		2.6e+07	
17 January	7.2e+06	6.2e+04	2.6e+03		1.3e+07	
18 January	8.4e+06	1.9e+04	2.6e+03		3.9e+07	
19 January	3.3e+06	1.1e+04	2.7e+03		3.2e+06	
20 January	3.0e+05	1.2e+04	2.8e+03		6.8e+06	

Daily Geomagnetic Data

Date	Middle Latitude Fredericksburg		High Latitude College		Estimated Planetary	
	A	K-indices	A	K-indices	A	K-indices
14 January	6	3-2-2-2-2-1-1-0	12	3-1-0-5-3-2-2-1	8	3-2-2-2-2-2-2-1
15 January	4	1-1-2-1-2-1-1-0	7	1-2-3-3-3-0-1-0	4	1-1-2-1-1-1-1-0
16 January	3	0-1-1-1-1-1-2-1	4	0-0-0-3-2-0-2-1	5	0-1-1-1-1-1-3-2
17 January	12	3-3-2-1-3-4-2-2	19	2-3-2-1-4-5-4-3	13	3-3-2-1-3-4-3-2
18 January	7	2-2-1-1-3-2-2-2	7	2-3-1-1-2-1-2-2	9	2-3-1-1-3-2-2-3
19 January	9	3-1-1-1-2-3-2-3	3	1-0-0-0-2-2-1-2	7	3-1-1-1-1-2-2-3
20 January	8	3-2-3-2-2-1-1-1	20	2-2-5-5-5-1-0-0	9	3-3-3-2-3-1-0-0

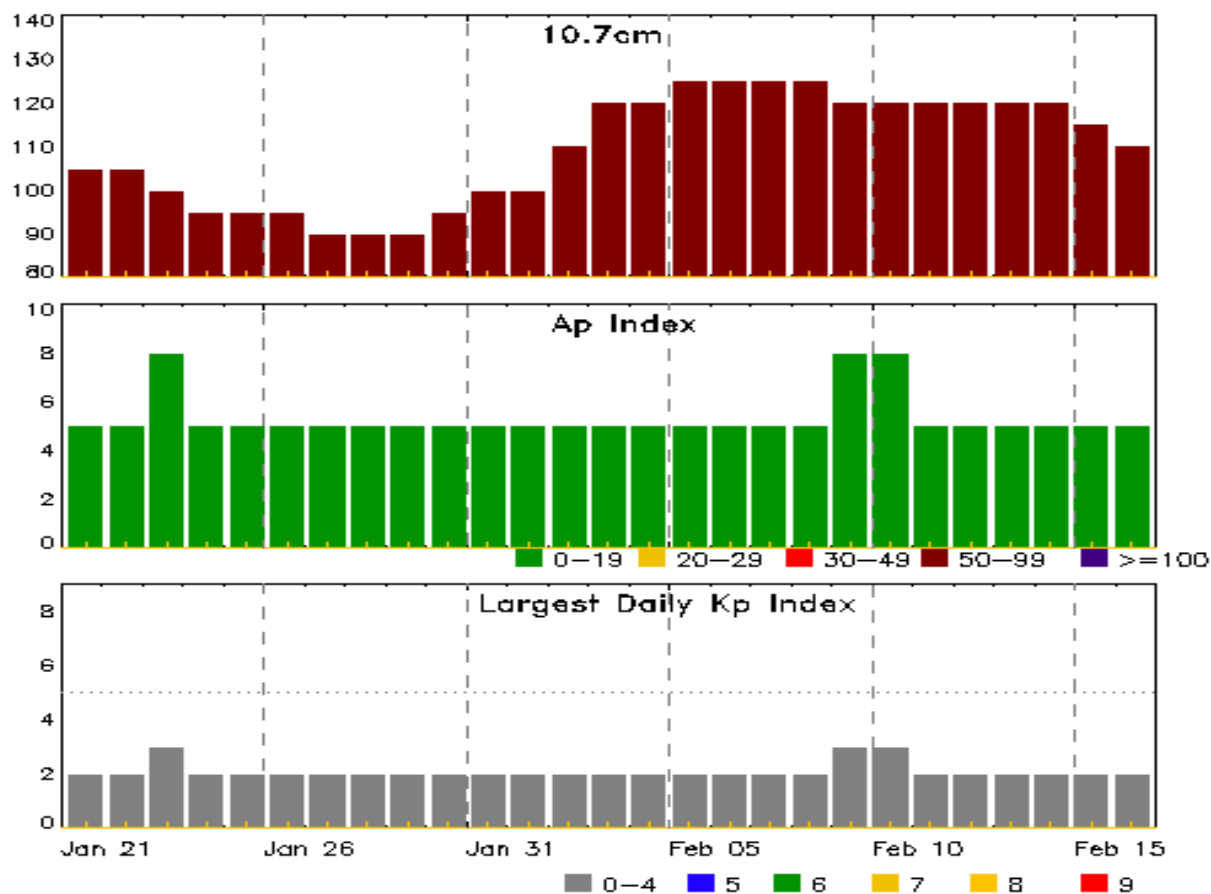


Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
17 Jan 1343	ALERT: Electron 2MeV Integral Flux \geq 1000pfu	17/1315
17 Jan 1451	WARNING: Geomagnetic K = 4	17/1500 - 1800
17 Jan 1529	EXTENDED WARNING: Geomagnetic K = 4	17/1500 - 18/0000
17 Jan 1530	WARNING: Geomagnetic K = 5	17/1545 - 2100
17 Jan 1531	ALERT: Geomagnetic K = 4	17/1526
17 Jan 2029	EXTENDED WARNING: Geomagnetic K = 4	17/1500 - 18/1000
17 Jan 2029	EXTENDED WARNING: Geomagnetic K = 5	17/1545 - 18/0700
17 Jan 2029	WATCH: Geomagnetic Storm Category G1 predicted	
18 Jan 0204	WATCH: Geomagnetic Storm Category G1 predicted	
18 Jan 1256	CONTINUED ALERT: Electron 2MeV Integral Flux \geq 1000pfu	17/1315
18 Jan 1734	ALERT: Type II Radio Emission	18/1710
19 Jan 1704	WARNING: Geomagnetic Sudden Impulse expected	19/1715 - 1815
19 Jan 1739	SUMMARY: Geomagnetic Sudden Impulse	19/1733
20 Jan 0849	WARNING: Geomagnetic K = 4	20/0848 - 1600
20 Jan 1556	CANCELLATION: Geomagnetic Storm Category G1 predicted	



Twenty-seven Day Outlook



Date	Radio Flux 10.7cm	Planetary A Index	Largest Kp Index	Date	Radio Flux 10.7cm	Planetary A Index	Largest Kp Index
21 Jan	105	5	2	04 Feb	120	5	2
22	105	5	2	05	125	5	2
23	100	8	3	06	125	5	2
24	95	5	2	07	125	5	2
25	95	5	2	08	125	5	2
26	95	5	2	09	120	8	3
27	90	5	2	10	120	8	3
28	90	5	2	11	120	5	2
29	90	5	2	12	120	5	2
30	95	5	2	13	120	5	2
31	100	5	2	14	120	5	2
01 Feb	100	5	2	15	115	5	2
02	110	5	2	16	110	5	2
03	120	5	2				



Energetic Events

Date	Time			X-ray		Optical Information			Peak		Sweep Freq	
	Begin	Max	Half Max	Class	Integ Flux	Imp/ Brtns	Location Lat CMD	Rgn #	Radio Flux		Intensity	
									245	2695	II	IV

No Events Observed

Flare List

Date	Time			X-ray Class	Imp/ Brtns	Optical		Rgn #
	Begin	Max	End			Location Lat CMD		
14 Jan	0115	0122	0125	C6.5	SF	N14W31		1652
14 Jan	0413	0417	0421	C1.5				1657
14 Jan	0450	0454	0456	C1.8				1657
14 Jan	0627	0632	0636	C1.3				1652
14 Jan	0739	0743	0747	B8.7				1654
14 Jan	0944	0948	0951	B8.1				
14 Jan	1538	1546	1556	C3.4	SF	N06E02		1654
14 Jan	1713	1720	1729	C1.3	SF	N03W09		1654
14 Jan	1845	1850	1853	B8.0				1650
15 Jan	0552	0556	0559	C2.2	SF	N04W11		1654
15 Jan	0626	0659	0710	C1.1				1650
15 Jan	0717	0733	0738	C1.0				1650
15 Jan	0851	0914	0928	C1.4				
15 Jan	1200	1210	1217	C1.2				1654
15 Jan	1448	1452	1457	B7.3				
15 Jan	2150	2200	2208	B7.8	SF	S23W67		1655
15 Jan	2250	2255	2259	C1.8	SF	N09W17		1654
16 Jan	0214	0218	0221	B7.1				1654
16 Jan	0856	0900	0903	B8.9				
16 Jan	1821	1923	2005	C2.2				1650
17 Jan	0832	0838	0840	B5.1				
17 Jan	2324	2327	2329	B5.2				
18 Jan	0139	0145	0150	B9.2				1652
18 Jan	0440	0445	0448	C1.7				1652
18 Jan	0815	0819	0822	B5.1				
18 Jan	0937	0943	0945	C2.4				1652
18 Jan	1309	1314	1317	C1.0				1654
18 Jan	1413	1417	1425	B4.6				1659
18 Jan	1650	1707	1712	C5.8	SF	N12E30		1654
18 Jan	1741	1747	1752	C2.3				1654
18 Jan	2208	2212	2224	B6.2	SF	N11E28		1660



Flare List

Date	Time			Optical			
	Begin	Max	End	X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
18 Jan	2325	2333	2338	B9.4	SF	N12E28	1660
19 Jan	0344	0351	0357	C1.1			1660
19 Jan	0618	0624	0628	C1.0			1654
19 Jan	0843	0900	0908	B6.8			1654
19 Jan	1707	1711	1714	B4.6			1654
19 Jan	2034	2037	2039	B5.6			1654
20 Jan	1423	1432	1443	C1.1			1654
20 Jan	1705	1737	1753	B7.0			1654
20 Jan	1917	1920	1923	B4.5			
20 Jan	2130	2133	2135	B3.8			1654
20 Jan	2253	2256	2259	B3.6			1654



Region Summary

Date	Location	Sunspot Characteristics						Flares							
	Lat CMD	Helio	Area 10 ⁻⁶ hemi.	Extent (helio)	Spot Class	Spot Count	Mag Class	X-ray			Optical				
		Lon						C	M	X	S	1	2	3	4
Region 1644															
02 Jan	N15E66	235	80	12	Eso	2	B								
03 Jan	N14E48	240	60	1	Hsx	2	A								
04 Jan	N15E35	239	40	2	Hsx	1	A								
05 Jan	N15E20	241	50	4	Cso	4	B								
06 Jan	N15E09	239	40	4	Cso	3	B								
07 Jan	N15W06	240	60	1	Hsx	1	A								
08 Jan	N15W19	239	40	2	Hax	1	A								
09 Jan	N13W31	239	20	1	Hax	1	A								
10 Jan	N15W44	238	20	1	Hsx	1	A								
11 Jan	N15W58	240	20	1	Hsx	1	A								
12 Jan	N15W72	241	20	1	Hsx	1	A								
13 Jan	N15W86	242	plage												
								0	0	0	0	0	0	0	

Crossed West Limb.

Absolute heliographic longitude: 240

Region 1646															
03 Jan	N13E57	231	80	1	Hsx	1	A								
04 Jan	N14E45	229	30	1	Hax	1	A								
05 Jan	N14E31	230	30	2	Hsx	1	A								
06 Jan	N13E17	231	40	1	Hsx	1	A								
07 Jan	N13E04	230	60	1	Hsx	1	A								
08 Jan	N13W09	229	30	2	Hrx	3	A	1							
09 Jan	N13W23	231	plage												
10 Jan	N13W37	232	plage												
11 Jan	N13W51	233	plage												
12 Jan	N13W64	233	plage												
13 Jan	N13W78	234	plage												
								1	0	0	0	0	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 230



Region Summary - continued

Date	Location		Sunspot Characteristics					Flares							
	Lat CMD	Helio Lon	Area 10 ⁻⁶ hemi.	Extent (helio)	Spot Class	Spot Count	Mag Class	X-ray			Optical				
								C	M	X	S	1	2	3	4

Region 1648

04 Jan	N05E53	221	20	3	Cro	2	B								
05 Jan	N05E40	221	40	7	Cao	3	B								
06 Jan	N05E26	222	30	6	Cro	6	B								
07 Jan	N05E10	224	10	1	Axx	1	A								
08 Jan	N05W03	224	plage												
09 Jan	N05W14	222	10	4	Axx	3	A								
10 Jan	N05W27	222	plage												
11 Jan	N05W42	224	plage												
12 Jan	N05W55	224	plage												
13 Jan	N05W70	226	plage												
14 Jan	N05W85	228	plage												
								0	0	0	0	0	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 224

Region 1649

04 Jan	S14E74	200	60	2	Hsx	1	A								
05 Jan	S15E60	201	80	2	Hsx	1	A								
06 Jan	S15E46	202	70	2	Hsx	1	A								
07 Jan	S16E32	202	140	2	Hsx	1	A								
08 Jan	S15E18	202	80	2	Hsx	1	A								
09 Jan	S15E05	202	70	2	Hsx	1	A								
10 Jan	S15W07	201	60	2	Hsx	1	A								
11 Jan	S16W21	203	60	3	Cao	3	B								
12 Jan	S16W35	204	60	3	Cao	3	B								
13 Jan	S16W49	205	60	3	Cao	3	B								
14 Jan	S15W62	204	30	5	Hax	2	A								
15 Jan	S16W75	203	20	1	Hrx	1	A								
16 Jan	S16W89	203	plage												
								0	0	0	0	0	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 202



Region Summary - continued

Date	Location		Sunspot Characteristics					Flares							
	Lat CMD	Helio Lon	Area 10 ⁻⁶ hemi.	Extent (helio)	Spot Class	Spot Count	Mag Class	X-ray			Optical				
								C	M	X	S	1	2	3	4
Region 1650															
04 Jan	S26E77	197	50	2	Hsx	1	A	1							
05 Jan	S28E63	198	190	11	Eao	5	B	4			2				
06 Jan	S29E54	194	240	14	Eao	9	B								
07 Jan	S30E42	193	250	13	Eho	22	B								
08 Jan	S30E30	192	120	12	Eao	7	B								
09 Jan	S30E16	192	100	13	Eao	7	B	1							
10 Jan	S29E01	194	120	12	Eao	8	B								
11 Jan	S28W16	198	110	5	Cao	2	B								
12 Jan	S28W30	199	60	3	Cao	3	B								
13 Jan	S28W44	200	60	3	Cao	3	B								
14 Jan	S30W52	194	50	1	Hax	1	A								
15 Jan	S31W65	194	10	2	Axx	4	A	2							
16 Jan	S31W79	195	plage					1							
								9	0	0	2	0	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 194

Region 1651															
04 Jan	N19E48	225	10	1	Axx	1	A								
05 Jan	N20E35	226	10	1	Axx	1	A								
06 Jan	N20E23	225	10	1	Axx	1	A								
07 Jan	N20E09	226	plage												
08 Jan	N20W05	227	plage												
09 Jan	N20W19	227	plage												
10 Jan	N20W33	228	plage												
11 Jan	N20W47	229	plage												
12 Jan	N20W60	229	plage												
13 Jan	N20W74	230	plage												
14 Jan	N20W88	231	plage												
								0	0	0	0	0	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 227



Region Summary - continued

Date	Location	Sunspot Characteristics						Flares							
	Lat CMD	Helio	Area 10 ⁻⁶ hemi.	Extent (helio)	Spot Class	Spot Count	Mag Class	X-ray			Optical				
		Lon						C	M	X	S	1	2	3	4
Region 1652															
04 Jan	N20E88	187	plage					1							
05 Jan	N20E74	187	60	3	Hsx	1	A	1	1						
06 Jan	N20E61	187	120	8	Dao	8	B	1							
07 Jan	N17E50	184	320	17	Fkc	34	BG								
08 Jan	N19E38	183	210	17	Fac	19	BG	2							
09 Jan	N19E25	183	200	13	Eac	18	BG								
10 Jan	N20E11	183	230	13	Eac	29	BG								
11 Jan	N19W00	182	210	13	Eai	16	BG								
12 Jan	N19W14	183	210	13	Eai	16	BG	3				2			
13 Jan	N19W28	184	210	4	Cao	16	BG	6	2			5			
14 Jan	N18W44	186	160	2	Hax	5	A	2				1			
15 Jan	N19W59	187	120	3	Cao	4	B								
16 Jan	N19W72	188	90	2	Hax	2	A								
17 Jan	N18W82	185	30	1	Hax	2	A								
								16	3	0	8	0	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 182

Region 1653															
05 Jan	N09E78	183	20	5	Hrx	1	A	1							
06 Jan	N09E63	185	30	5	Cso	3	B	4							
07 Jan	N07E49	185	30	7	Cro	6	B	2							
08 Jan	N09E35	185	30	6	Cro	4	B	1							
09 Jan	N09E21	186	20	3	Cso	2	B								
10 Jan	N11E06	188	10	1	Hsx	1	A								
11 Jan	N09W08	190	10		Cao	2	B								
12 Jan	N09W21	190	10	1	Cao	2	B								
13 Jan	N09W35	191	plage												
14 Jan	N09W49	192	plage												
15 Jan	N09W63	192	plage												
16 Jan	N09W77	193	plage												
								8	0	0	0	0	0	0	0

Died on Disk.

Absolute heliographic longitude: 188



Region Summary - continued

	Location		Sunspot Characteristics					Flares							
		Helio	Area	Extent	Spot	Spot	Mag	X-ray			Optical				
Date	Lat CMD	Lon	10 ⁻⁶ hemi.	(helio)	Class	Count	Class	C	M	X	S	1	2	3	4
Region 1654															
08 Jan	N08E71	149	260	5	Hhx	2	A	1							
09 Jan	N10E60	148	350	14	Eki	15	B	2							
10 Jan	N08E47	147	770	16	Fki	21	BG	10			2				
11 Jan	N08E31	151	1100	17	Fki	36	BG	11	2		2	1			
12 Jan	N08E18	151	950	17	Fkc	31	BG	7			5				
13 Jan	N08E04	152	950	17	Fkc	31	BG	4			2				
14 Jan	N08W05	147	920	21	Fkc	49	BG	2			2				
15 Jan	N06W19	147	990	21	Fkc	45	BGD	3			2				
16 Jan	N06W33	149	590	21	Fkc	18	BGD								
17 Jan	N07W47	149	540	20	Fkc	27	BG								
18 Jan	N07W59	148	460	22	Fko	18	BG	3							
19 Jan	N07W73	149	360	22	Fko	11	BG	1							
20 Jan	N08W84	147	280	18	Fko	9	BG	1							
								45	2	0	15	1	0	0	0

Still on Disk.

Absolute heliographic longitude: 152

Region 1655

09 Jan	S22W02	210	10	3	Bxo	3	B								
10 Jan	S21W11	207	30	4	Cso	3	B								
11 Jan	S21W24	206	10	5	Cro	2	B								
12 Jan	S21W37	206	10	5	Bxo	2	B								
13 Jan	S21W51	207	plage												
14 Jan	S21W65	208	plage												
15 Jan	S21W79	208	plage								1				
								0	0	0	1	0	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 210



Region Summary - continued

Date	Location	Sunspot Characteristics						Flares							
	Lat CMD	Helio	Area 10 ⁻⁶ hemi.	Extent (helio)	Spot Class	Spot Count	Mag Class	X-ray			Optical				
		Lon						C	M	X	S	1	2	3	4
Region 1656															
11 Jan	N22E52	130	10		Axx	1	A								
12 Jan	N22E39	130	30	7	Cro	7	B								
13 Jan	N22E25	131	30	7	Cro	7	B								
14 Jan	N23E15	127	10	7	Bxo	4	B								
15 Jan	N22W00	128	10	1	Axx	1	A								
16 Jan	N21W14	130	10		Axx	1	A								
17 Jan	N21W28	131	plage												
18 Jan	N21W42	132	plage												
19 Jan	N21W56	133	plage												
20 Jan	N21W70	134	plage												
								0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 128

Region 1657															
11 Jan	S17E23	159	10	2	Cro	2	B								
12 Jan	S17E09	160	plage												
13 Jan	S17W05	161	plage												
14 Jan	S17W19	162	plage							2					
15 Jan	S17W33	162	plage												
16 Jan	S17W47	163	plage												
17 Jan	S17W61	164	plage												
18 Jan	S17W75	165	plage												
19 Jan	S17W89	166	plage												
								2	0	0	0	0	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 161



Region Summary - continued

Date	Location		Sunspot Characteristics					Flares							
	Lat CMD	Helio Lon	Area 10 ⁻⁶ hemi.	Extent (helio)	Spot Class	Spot Count	Mag Class	X-ray			Optical				
								C	M	X	S	1	2	3	4

Region 1658

13 Jan	S12E63	90	100	4	Cso	6	B								
14 Jan	S11E51	91	90	6	Cso	7	B								
15 Jan	S12E36	92	130	5	Cso	5	B								
16 Jan	S12E21	95	90	2	Hax	1	A								
17 Jan	S13E08	94	70	2	Hax	2	A								
18 Jan	S12W05	94	90	2	Hsx	3	A								
19 Jan	S13W19	95	70	2	Hsx	1	A								
20 Jan	S12W32	95	60	2	Hsx	1	A								
								0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 94

Region 1659

17 Jan	N04E53	50	10	1	Bxo	3	B								
18 Jan	N04E40	50	10	3	Bxo	5	B								
19 Jan	N04E27	50	plage												
20 Jan	N04E12	52	plage												
								0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 52

Region 1660

19 Jan	N11E12	64	50	4	Dso	4	B	1							
20 Jan	N13W02	65	70	5	Dao	8	B								
								1	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 65

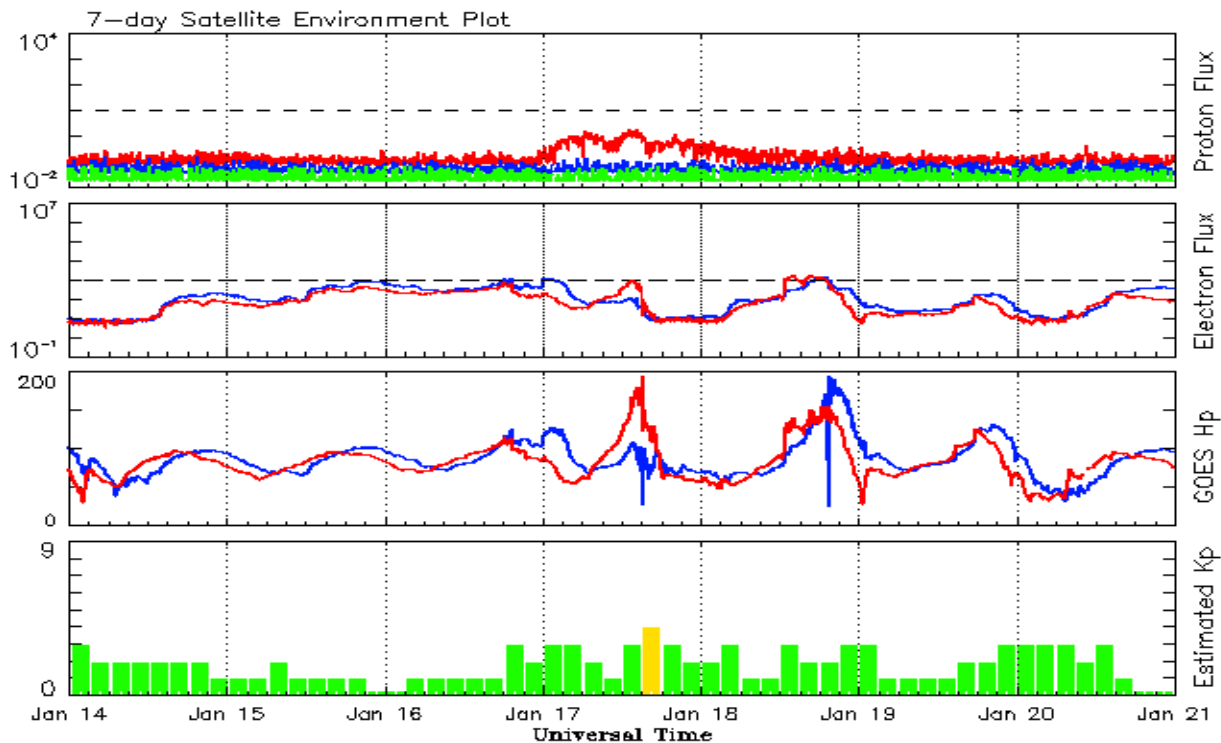


Recent Solar Indices (preliminary)
Observed monthly mean values

Month	Sunspot Numbers					Radio Flux		Geomagnetic	
	Observed values		Ratio	Smooth values		Penticton	Smooth	Planetary	Smooth
	SEC	RI	RI/SEC	SEC	RI	10.7 cm	Value	Ap	Value
2011									
January	32.1	18.8	0.59	47.2	30.9	83.7	91.2	6	6.7
February	53.2	29.6	0.55	50.6	33.4	94.5	92.7	6	6.8
March	81.0	55.8	0.69	55.2	36.9	115.3	95.8	7	7.2
April	81.7	54.4	0.67	61.5	41.8	112.6	100.4	9	7.5
May	61.4	41.6	0.68	69.0	47.6	95.9	105.6	9	7.5
June	55.5	37.0	0.67	76.5	53.2	95.8	110.9	8	7.4
July	67.0	43.8	0.66	82.5	57.3	94.2	115.4	9	7.3
August	66.1	50.6	0.77	84.9	59.0	101.7	117.9	8	7.4
September	106.4	78.0	0.73	84.6	59.5	134.5	118.4	13	7.7
October	116.8	88.0	0.75	84.6	59.9	137.2	118.4	7	8.0
November	133.1	96.7	0.73	86.3	61.1	153.1	119.5	3	8.0
December	106.3	73.0	0.69	89.2	63.4	141.2	121.6	3	8.0
2012									
January	91.3	58.3	0.64	92.0	65.5	133.1	124.4	6	8.3
February	50.1	32.9	0.66	94.2	66.9	106.7	126.7	7	8.4
March	77.9	64.3	0.82	94.1	66.8	115.1	126.8	14	8.1
April	84.4	55.2	0.65	91.3	64.6	113.1	125.8	9	8.0
May	99.5	69.0	0.69	87.7	61.7	121.5	123.8	8	8.2
June	88.6	64.5	0.73	83.9	58.9	120.5	121.1	10	8.3
July	99.6	66.5	0.67			135.6		13	
August	85.8	63.1	0.74			115.7		7	
September	84.0	61.5	0.73			123.2		8	
October	73.5	53.3	0.73			123.3		9	
November	89.2	61.4	0.69			120.9		6	
December	60.4	40.8	0.68			108.4		3	

Note: Values are final except for the most recent 6 months which are considered preliminary.
Cycle 24 started in Dec 2008 with an RI=1.7.





*Weekly Geosynchronous Satellite Environment Summary
Week Beginning 14 January 2013*

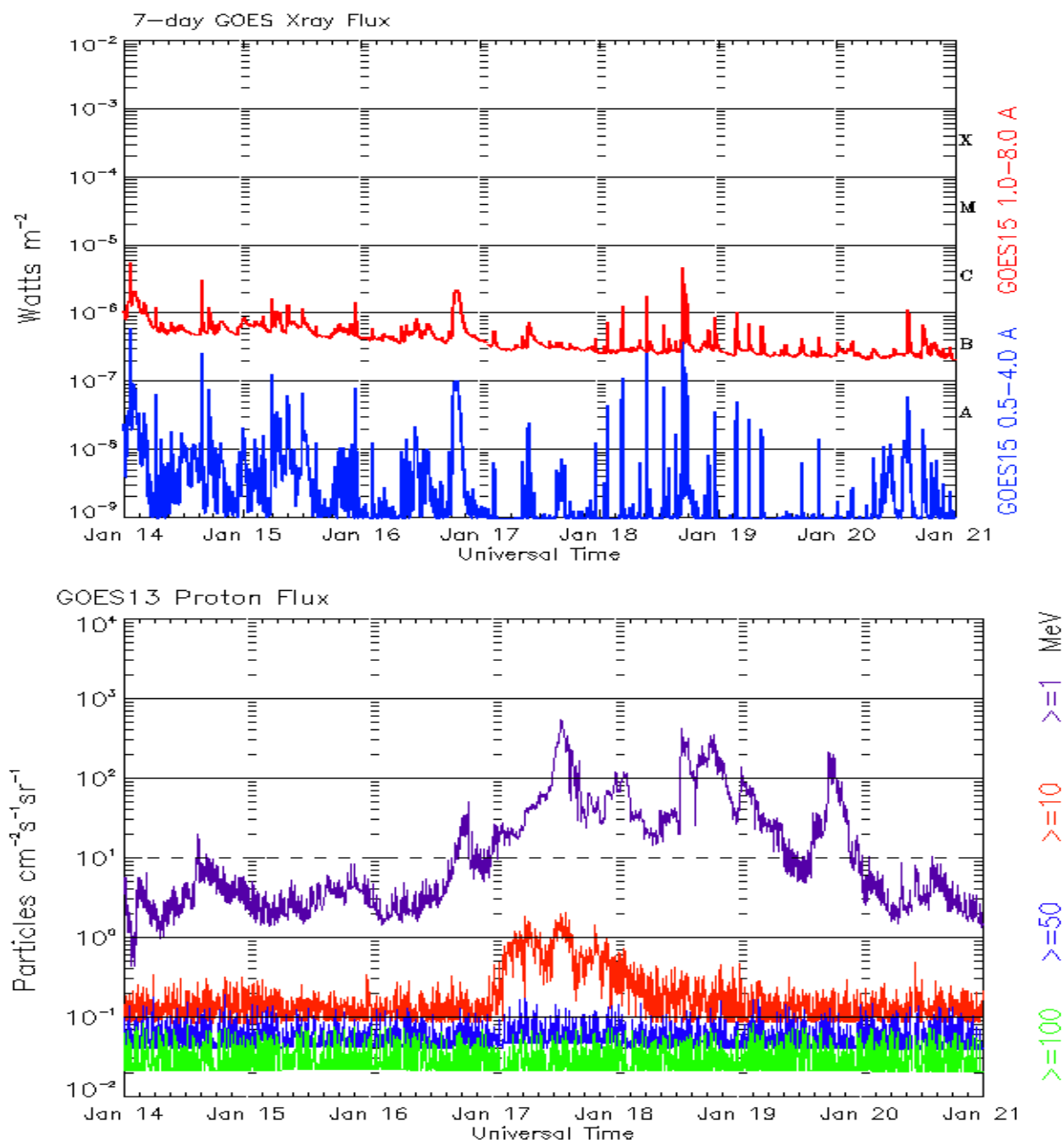
The proton flux plot contains the five-minute averaged integral proton flux (protons/cm²-sec -sr) as measured by the SWPC Primary GOES satellite, near West 75, for each of three energy thresholds: greater than 10, 50, and 100 MeV.

The electron flux plot contains the five-minute averaged integral electron flux (electrons/cm²-sec -sr) with energies greater than 2 MeV by the SWPC Primary GOES satellite.

The Hp plot contains the five minute averaged Hp magnetic field component in nanoteslas (nT) as by the SWPC Primary GOES satellite. The Hp component is parallel to the spin axis of the satellite, which is nearly parallel to the Earth's rotation axis.

The Estimated 3-hour Planetary Kp-index is derived at the NOAA Space Weather Prediction Center using data from the following ground-based magnetometers: Boulder, Colorado; Chambon la Foret, France; Fredericksburg, Virginia; Fresno, California; Hartland, UK; Newport, Washington; Sitka, Alaska. These data are made available thanks to the cooperative efforts between SWPC and data providers around the world, which currently includes the U.S. Geological Survey, the British Geological Survey, and the Institut de Physique du Globe de Paris.

The data included here are those now available in real time at the SWPC and are incomplete in that they do not include the full set of parameters and energy ranges known to cause satellite operating anomalies. The proton and electron fluxes and Kp are 'global' parameters that are applicable to a first order approximation over large areas. H parallel is subject to more localized phenomena and the measurements generally are applicable to within a few degrees of longitude of the measuring satellite.



*Weekly GOES Satellite X-ray and Proton Plots
Week Beginning 14 January 2013*

The x-ray plots contains five-minute averages x-ray flux (Watt/m²) as measure by the SWPC primary GOES X-ray satellite, usually at West 105 longitude, in two wavelength bands, 0.05 - 0.4 and 0.1 - 0.8 nm. The letters A, B, C, M and X refer to x-ray event levels for the 0.1 - 0.8 nm band.

The proton plot contains the five-minute averaged integral flux units (pfu = protons/cm² -sec -sr) as measured by the primary SWPC GOES Proton satellite for each of the energy thresholds: >1, >10, >30, and >100 MeV. The P10 event threshold is 10 pfu at greater than 10 MeV.



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Notice: The 27-day Outlook, Satellite Environment, X-ray and Proton plots have been redesigned.
Comments and suggestions are welcome SWPC.Webmaster@noaa.gov

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